Vol. II.] [No. 6.

THE

Canadian Horticulturist,

PUBLISHED BY

The Fruit Growers' Association of Ontario.

JUNE.

APR 25

EDITOR:

D. W. BEADLE,

ST. CATHARINES, ONTARIO.

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PRUNING THE GRAPE VINE.

BY A. HOOD, BARRIE, ONT., (LATE OF FERGUS.)

So much has been written about pruning, that it is almost presumptuous in one who cannot boast of much experience, to imagine himself able to say anything worth reading on this already threadbare subject; but it is precisely because so much has been said and so much has been done in this direction that it becomes necessary that some check should be put on this pruning mania, or there is danger of its being overdone.

An article which appeared in the August number of the CANADIAN HORTICULTURIST, for 1878, on the subject of summer pruning, met with my most unqualified approval. In it the writer contends that the nutriment of the grape is prepared in the leaves, and if a large part of these be removed, the fruit, be the summer what it may, will never ripen. This appears reasonable, because it is one of the functions of leaves to expose the sap to the action of the sun and air; exactly in the same manner as our lungs expose the venous blood to the action of the atmosphere, by which it is changed into arterial blood, and becomes fitted to afford nourishment to all the tissues of the body. The leaves therefore are the lungs of the plant; and it follows as a matter of course that if half of them are removed, the chemical change that should take place in the sap, through the action of the sun upon them, is only imperfectly accomplished, and the ripening of the fruit must be retarded, or the health of the vine affected, in the same way as is the health of a patient who has lost the use of one of his lungs by tubercular consumption; the analogy however between the two cases is not quite perfect, because the vine can produce more leaves, whereas lungs lost by disease cannot be restored; but the production of fresh leaves to take the place of those pruned away, exhausts the vitality of the vine, and this, combined with

a deficiency of healthy sap, makes it more easily assailable by diseases such as mildew, rot, &c., and may have the effect of rendering it less able to endure the severity of the winter.

It would be easy to ascertain by actual experiment whether exposing the fruit to the direct rays of the sun has the effect of accelerating the ripening process; but in the absence of such evidence, it will suffice to say, that without leaves fruit will neither grow nor ripen; and in some cases it would appear that it ripens more rapidly in the shade, for it has been observed that grapes grown nearest the ground, and therefore most in the shade, are not only the largest and finest flavored, but ripen several days earlier than those grown near the tops of trellises. What says the editor of the *Pacific Rural Press?* "The largest, sweetest, and best flavored fruit to our taste, is to be found on vines trained about two feet from the ground and *well screened from the direct rays of the sun.*" I have been advised to take the leaves off tomato plants with a view of hastening the ripening process, and have seen that course followed by others, but never could perceive any beneficial results; in fact, it rather appeared as though the plants devoted their whole energies to renewing or replacing the leaves that had been so ruthlessly cut away; and the ripening, while this was going on, was rather retarded than otherwise.

The annual pruning of vines so generally practised, whether done in the fall, the winter, or the spring; whether on the renewal system or any other system, is not less injurious to the general health and productiveness of the vines than that above referred to as summer pruning.

There is throughout the vegetable kingdom, when nature is allowed to take its own course, a certain balance preserved between the roots on the one hand, and the leaves and branches of all trees and plants on the other; and to secure the best results, it is necessary that this balance should be maintained. It is just as important for the health of the roots, that a certain surface of leaves and branches should be exposed to the sun and air, as it is that there should be a sufficiency of roots to keep those leaves and branches in a healthy condition; and nature when left to herself always preserves this uniformity. The annual pruning of grape vines destroys this balance, by continually cutting down the branches, while the roots are allowed to grow unchecked; and the sap that should be chemically changed by the action of the sun on the surface of the leaves, is not so acted upon as to allow

of its being returned to the roots in sufficient quantities to keep them in a vigorous condition. May it not therefore act on the general health of the vine in the same way that imperfectly oxygenized blood does on the human system?

When vines are planted so close together that the branches have not sufficient room to extend themselves, and are therefore pruned to keep them within bounds, the consequence is that innumerable shoots are thrown out from every joint of those branches that have escaped; and these if left to themselves will be covered with an abundance of leaves and a mass of foliage that the cultivator thinks too great for a large crop of fruit; therefore summer pruning is thought necessary, and the knife is again called into requisition, to the injury, as the writer believes, of both the vine and the fruit. Eight feet apart each way is the usual distance recommended for planting vines; whether or not such recommendation proceeds from parties having vines to dispose of, I shall not stop to enquire, but will merely state that in a paper read before the Michigan Pomological Society, the writer stated that in 1863 he planted one hundred and twenty Concord vines, six feet apart in the rows. They had good care and attention, but bore little fruit. The spring of the seventh year from planting he removed every other vine, and extended the arms to six feet instead of three; the result was a fine crop of fruit. To further test the matter, every other vine was removed from a Catawba vineyard of one thousand vines, that had been planted eight feet apart in the rows, and the arms of the remaining vines extended to eight feet instead of four; this largely increased the quantity of grapes. He also stated that he had Concord vines covering from twenty-four to forty-eight feet of trellis, that carry every year more grapes by actual test than any adjoining vines planted twelve feet apart and covering the same number of feet of trellis. Vines allowed to run at pleasure require no summer pruning, because their growth is not so rampant; they can also be laid down for winter protection without difficulty, which with short arms is impracticable.

Every practical gardener knows that if the stalks and leaves of the Rhubarb or pie-plant be too closely pulled, the roots will cease to grow, and the stalks will dwindle away till not fit for use. Yea, even Canadian Thistles can be completely destroyed by cutting off the tops persistently. Can it therefore be expected that the grape vine can be subjected to such ruthless pruning as is generally recommended without

injurious results? Plant your grape vines therefore, if you please, eight feet apart; but if you do so, be sure and follow the example above recorded, and dig out every other vine as soon as it is perceived that they want more room, and very little summer, or indeed, any other pruning will be required. Are we then to allow our vines to grow just as they please, and permit every poor weakly shoot that starts to grow? By no means; train your vines to any shape you please, and cut away any shoots you don't want, but permit those arms that are retained to run as far as they will, and cover the trellis as thickly with foliage as they are able. It is not the cutting of this shoot, or that arm, that will injure a vine, it is confining it to eight feet of trellis when it is able to cover eighteen. It is the persistent and continual shortening in of the arms or spurs, so that it is never permitted to revel in its wonted luxuriance of foliage.

APPLES FOR THE AMATEUR.

BY R. BURNET, LONDON.

A paragraph or two on apples especially adapted to amateur culture may not be out of place in the HORTICULTURIST. The lists presented at the winter meeting of the Fruit Growers' Association, at Hamilton, on the most profitable market varieties, have created quite a stir among apple growers. A short list of the finer varieties of apples, more particularly suited for home use, will find an echo in the minds of a great many amateur Canadian cultivators. In such cultivation, the matter of hardiness in bearing carriage, need not be taken into account. Domestic use is the great desideratum, and the highest flavored sorts may therefore be recommended without detriment to the grower.

First, among many compeers, is the Pomme Royale, a popular dessert apple, sometimes known under the name of Dyer, which name was given to it in mistake by the Massachusetts Horticultural Society, the members of which supposed it to be a seedling of Mr. Dyer, of Rhode Island. It is undoubtedly of French origin, and is no unworthy product and representative of La Belle France. Its character is seen in the numerous "spicy" names which it has at various times received and borne. "Golden Spice," "Coe's Spice," "White Spice," "Smith-

field Spice," are samples of some of its synonyms, which it has received at different times and in different localities. It is to all intents and purposes a "spicy" apple. Its habit of ripening for a lengthened period is one of its peculiarities, recommending it for popular cultivation. We must not overlook the fact, however, that it sometimes "cracks" and "gapes" with very goodness, which cracks, while they mar the fruit for market, scarcely affect its value for domestic uses. The fruit is medium size, roundish, and regularly formed, smooth skin, pale yellow, with a faint blush, and a few dark specks on one side. The flesh is white, crisp, and juicy, with a very agreeable aromatic sub-acid flavor. It continues in season from early September till towards the end of October, and will amply repay the care and cultivation of the husbandman.

Another valuable apple for amateur cultivation is the Summer Rose. It ripens early in August; its excellence is testified to by the persevering visits of bees and wasps—no bad judges of good fruit. The ants too are fond of piercing its rich, waxen, yellow, streaked, ruddy sides, and greatly enjoy the early harvest it affords to their raiding habits. This apple is a delicious dessert fruit, scarcely of medium size, but it will prove a great acquisition to the amateur and general cultivator. We have known this apple yield a good return in the near home market, though the delicacy of its skin will always be a drawback to its marketable qualities.

Downing's description may be brief, but it is emphatic, "very good, or best," which we cordially, endorse. Two trees of this variety would keep the dessert table well replenished till the later varieties are ready for presentation.

Though the Early Harvest be confessedly a good market variety, yet we would not fail to recommend it for amateur cultivation. Downing characterizes it by three admirable qualities, viz: for dessert, cooking, and productiveness. It may be said to be the best known of our early varieties, and deservedly so. The first of July finds it ready for use, and as descriptive of its earliness, it has been known in some localities as "the Large White Juneating." In early seasons, we have often ate it in the end of June. The color, when fully ripe, is a bright straw color, "flesh very white, tender, juicy, and crisp, with a rich, sprightly, sub-acid flavor." This apple has also received Downing's highest imprimatur, "very good to best."

We have long cultivated the Early Joe. The first intimation of its excellence was communicated to us by Mr. W. A. Smith, Paris Road, Brantford, who has cultivated this sort for many years, and who is no mean judge of good fruit. The Early Joe is of American origin, having originated in Ontario County, N. Y. State. Of slow growth, it requires high culture for fair fruit, under favorable circumstances it is most productive. The size of the fruit is under medium, oblate, slightly conic, smooth, yellowish, shaded and striped with red, and thickly sprinkled with greenish spots. Flesh tender, juicy, with a very agreeable vinous flavor. It ripens from the middle of August to the middle of September. When known, this variety is greatly sought after, and esteemed for its good quality.

Benoni is an apple in some respects equal if not superior to the Early Joe. They both ripen in August, and are both excellent fruits. The Benoni originated in Massachusetts, from which have come so many of our desirable fruits. Hardihood of tree and productiveness of fruit go to recommend this variety. It is valuable both for market and table. The amateur will find it a most desirable variety for cultivation. Young people with keen appetites are fond of making large inroads into the dessert dish. The flesh is distinctly yellow, juicy, tender, pleasant, and sub-acid.

The Red Astrachan and Early Strawberry may be ranked together. Both varieties will give general satisfaction. The former was introduced into England from Sweden, and the latter is an American apple, originating near New York city. The Red Astrachan has become thoroughly acclimatized in Canada, and is very generally distributed. It requires to be pulled from the tree a day or two before it is ripe and ripened in the house. Left on the tree till fully ripe, it is apt to become mealy. The Early Strawberry has a tendency to profusely cast its young fruit. It is a rich fruit, when fairly ripe, and commands good prices in the markets of the United States.

The foregoing varieties will afford much satisfaction to all cultivators. To the amateur they are a *sine qua non*. It might not be out of place for us to say that one or two trees each of these varieties might be profitably planted along with the more general sorts. We guarantee delight and happiness from their cultivation, and when known and appreciated will lead to very general cultivation.

EFFECTS OF THE SCION UPON THE STOCK.

BY A. GILCHRIST, GUELPH, ONT.

Much has been written about the influence of the scion upon the stock, and *vice versa*, but comparatively little has been added to our knowledge of the controlling cause, because the experiments and observations have been so variable and conflicting. I have been grafting the weeping varieties of *Abutilons* upon the strong upright growing sorts, the object in view was to obtain miniature weeping trees for the greenhouse, which are novel and pretty. *Abutilon Mesopotamicum Variegatum*, which is of a slender weeping habit, grafted about three feet high upon any upright growing variety, makes one of the most beautiful weeping trees. In the south, where it would stand the winter, it would be a decided acquisition. Southern nurserymen might work it up, and give their patrons something new and beautiful. From these experiments in grafting, some curious variations have been produced. A *Mesopotamicum Variegatum* was grafted upon a *Duc de Malakoff*. Scarcely had the union taken place, when I observed faint markings of a yellowish appearance upon the leaves of the stock below the graft, which soon became as beautiful and distinct as those of a Thompsoni. The experiment was repeated with the same happy results. In one case the leaves became margined with white, but it soon disappeared, the leaves returning to their original color, while the mottled leaves retained their variation. In my next experiment I reversed the operation. I grafted a Santana upon a Thompsoni, but the stock had no effect upon the scion. One half of the plant is variagated, the other half green. These two varieties have been growing together for two years with no perceptible change. *Duc de Malakoff*, having deeply cleft or parted leaves, I was anxious to propagate it with those beautiful markings, it being a fine contrast to A. Thompsoni; but after the cuttings were rooted and growing freely, they always went back to their normal condition, showing it had the power to repel the disease which had been communicated to its cells. No doubt many of the variegated leaved plants that florists cultivate owe their beauty to some species of disease. From these observations it appears that the downward movement of the sap from the scion assumed controlling power, and that the scion has great influence upon the stock; no doubt the stock has a similar influence upon the scion, but not so much as many believe.

THE REBECCA GRAPE.

BY B. GOTT, ARKONA.

This excellent grape has been before the public for some time. It is of American origin, and is quite a favorite in some localities, but it is not so popular or so well known in others. Most grapes have their favorite localities or latitudes where they do their level best, and exhibit their highest qualifications, but are not so illustrious if taken from their native habitat and removed to places of less congeniality. Still there are some remarkable exceptions to this rule among grapes. In looking over the lists of catalogued fruits by the American Pomological Society, we get a better idea of these peculiarities of fruits than from any other source. This national influential society has divided the whole region of the United States and British Provinces very properly into three grand divisions, viz: the northern division, from latitude 42° to 49° north; the central division, from latitude 35° to 42° north; and the southern division, from latitude 28° to 35° north. In all these three grand divisions some varieties of grapes are equally popular favorites, notwithstanding the great diversity of climate, and are double starred several times in each of them. The Concord and Hartford Prolific for instance are most remarkable examples of this wonderful power of adaptation to differences of climate, and are universally popular, even in so many varied regions. The Delaware too is a bright and rich example of this same peculiarity, and is bedizened with double stars, north and south, with the greatest freedom. This is doubtless a most remarkable and a most valuable quality when possessed by any fruit so perfectly as it is by these justly popular varieties of grapes. The Rebecca, though a very good grape, is not one of this highly favored class. I do not mean to say by this that it is not popular, far from it, but I wish to be understood that at present it is not a favorite over so wide a range of territory and in so many different zones as is the Delaware. It is strictly a northern grape; although on the catalogue above referred to, it is double starred for West Virginia; starred for Maryland and district of Columbia, and for Pensylvania, in the central division; and in the northern division it is starred for Michigan, New York, Massachusetts, and Maine, and we think ought also to be starred for Ontario, in Canada.

J. J. Thomas' description of this grape is very beautiful, and we take pleasure in copying it *verbatim* as follows: "Bunches nearly cylindric, compact, heavy, often shouldered; berries medium, oval; color, light green in the shade, golden in the sun, with a light bloom, somewhat translucent; flesh juicy, sweet, delicious. Ripens eight or ten days before Isabella, and keeps a long time. Healthy, not disposed to mildew. When fully ripe, one of the finest flavored of all grapes. Moderate grower, foliage tender. Hudson, N. Y." P. Barry says in addition, "When well ripened it is not surpassed by any of the native grapes." This is high praise, and is abundantly corroborated by our own experience with it here. We do not exactly know, however, what Mr. Thomas means by saying in his lucid description, "foliage tender," as we have not by any means found it so, but just the reverse; nor do we fully agree with his statement of the time of ripening, viz: "eight or ten days before Isabella," as with us it matured much before that variety, and is ready for the market with Delaware. Last season, when our vineyards were so badly cut back by the May frosts, so that our vines bore only a very light crop, and some not any at all, the vines of Rebecca were most profusely loaded, and the bunches were most remarkably firm and well formed. Some varieties too with us suffered much from mildew, but not a speck of mildew on Rebecca leaves or fruit. The charge that it is a slow grower is not well sustained, and applies only to it while young, and under the tender care of the nurseryman. For the first two or three years of its life it is rather slow, and makes only small wood as compared with Concord or Hartford, but after it gets well established in the soil, and the soil is generous and suitable, it is a strong and rampant grower.

I am happy to endorse the following quotation taken from the pages of the *Country Gentleman*, Albany, N. Y., as being very timely just here: It says, "I notice that in many of the fruit catalogues issued by our most prominent nurserymen, the Rebecca grape is mentioned as a variety of merit, and worthy of a place in the garden of the amateur, but too tender for vineyard culture. This seems to me to do great injustice to this grape, which, combining beauty with excellence, takes the lead in New York market, commanding a higher price than any other variety grown out of doors. I was told a few weeks since by an up-town fancy fruit dealer, that he does not attempt to deal in this variety, because they are so expensive that few people

could afford to purchase them. With me, out of over twenty varieties the Rebecca resists the attacks of mildew best of all, not excepting Concord, Salem, or any of the so called ironclads, which some years suffer to the injury of the crop, while the Rebecca growing by their side exhibits bright clean foliage and perfect fruit. It is also regular in its bearing, yielding a fair crop every year, and when properly grown often throws out arms fifteen or twenty feet in length. Then too the symetrical and uniform size of the clusters renders it one of the most pleasant grapes to handle in packing for market, besides possessing the quality of withstanding injury by rough handling on the road better than any other grape of its class. I believe there are several new varieties soon to be offered to the public, and it is claimed that some of them bear a strong resemblance to the Rebecca, which is certainly a recommendation for the young strangers worthy of notice, and should ensure them at least a space in the experimental row of every vineyard.

THE VARIEGATED TEA ROSE, AMERICAN BANNER.

In the January number of the *American Agriculturist,* is an article from the pen of Peter Henderson, giving an account of this striking novelty in the way of a striped Tea Rose. He states that it originated in 1877, with George Cartwright, Esq., of Dedham, Massachusetts, as a "sport" upon the old Tea Rose, Bon Silene, and that the most marvellous feature in this sport is the fact that not only is the flower different, but the leaves also are quite unlike the leaves of the parent plant. It is nothing uncommon to find flowers of very dissimilar colors upon the same plant; instances of this are quite frequent in Dahlias, Verbenas, Petunias, and Carnations, but such a marked change in the foliage is something quite unprecedented. This rose is distinctly striped crimson and white, and has this advantage over all former striped roses, that it is of the ever-blooming class. Peter Henderson secured this beautiful novelty, and having propagated it sufficiently, now offers it for sale. We understand that so far, at least, the rose has retained its beautiful striped variegation, and gives promise of being a very valuable and unique addition to our list of ever-blooming roses. It is an exceedingly free bloomer, and retains the delightful fragrance of the parent rose.

A NEW INDUSTRY—FIG CULTURE AT THE NORTH A SUCCESS.

BY G. F. NEEDHAM, WASHINGTON, D. C.

Some writer has said: "In a climate like ours any addition to the luxury of fruits should be studied. We cannot have many of the productions of the more southern climes, but by a little care we can have some that are seldom grown."

The vegetable world has been "studied," and the result is that most of our vegetables have been gathered from these tropical homes. I propose in this paper to study one of the tropical fruits, the fig, from both a theoretical and practical standpoint. And I make this emphatic statement that no other crop can be raised which will give so certain and so large returns in our Middle and Northern States, as that delicious fruit, the fig.

The fig flourishes in much more unfavorable climates than our own. In Great Britain, for instance, figs have been grown in the open air for more than three hundred years; the original trees brought from Italy by Cardinal Pole, still bearing. Now, if in that damp, foggy, "misty, moisty" atmosphere, where melons and cucumbers cannot be grown, the fig will succeed, how much more will it flourish in our bright and sunny climate!

The climate of our north temperate zone is one of the best possible for the full development of the fig. It is a well known fact that too great heat is inimical to this plant; it causes the tree to cast its fruit. Our northern climes are superior to the southern for another reason—our days are several hours longer than at the south, which gives a lengthened and tempered day, which precisely suits the fig.

Countries where figs are grown as an article of commerce are exposed to similar vicissitudes of climate as are our Northern States. I have before me a letter from a gentleman in Massachusetts, in which he says: "I was born in the Levant, and I was a resident in Constantinople one winter, when the Golden Horn (the Bosphorus) was frozen over, and there was a snow fall of eighteen to twenty inches for a couple of weeks, without injury to the fig trees in the vicinity."

The reason that the fig yields so abundantly, is not only that it is prolific, but first, because the fruit has no insect enemies, and secondly,

the wood has no blight or disease. Every *other species of fruit tree gives the grower a world of trouble on account of these.* Of these facts all are too well aware.

Common sense is quite as necessary in fig growing as elsewhere. A correspondent informs me that he has a "fig tree with thirty five sprouts." What kind of an apple tree would that be? He would have to wait a long time for any apples, and then they would be "smaller by degrees and beautifully less." Cut off all the sprouts but one, and plant them, and "in the sweet by-and-by" you will have thirty five trees.

The writer of a paper on the cultivation of the fig, (Department of Agriculture Special Report No. 4,) speaking of fig raising in the Southern and Middle States, says, "There are few fruit trees with so little trouble in their cultivation, that bear so abundantly or yield so much for so little care as the fig." Again, "The fruit is so great a luxury and so useful in so many ways, there is no reason why it should not become a very considerable article of commerce, and thus add to the wealth of the country."

If fig growing is so desirable for the Southern and Middle States, the testimony of Gen. Worthington is direct to the point, and makes sure the fact that fig growing is a success in our Northern States also. After years of cultivating the fig in Ohio, he says: "It is quick grown, suits our climate admirably, is easily protected, is a sure bearer, and very prolific. The trees begin to bear when two years old, and when four or five they produce from the same area, with less labor, a greater and more certain crop than either potatoes or tomatoes. I like them best fresh from the tree, and often breakfast on them. The demand by the family is very great. The fig tree is eminently *the* fruit for the cottager and villager, and when its merits and adaptability to our climate become known, it will be as regularly grown for family use all over the Ohio valley as either the potato or tomato." And what is true of that State is true of the whole north.

In the Scriptures the vine and fig are very often mentioned in connection! (By the way, the fig will flourish where the vine grows.) And I ask that all my readers will join with me in a very loud LAUS DEO at the near approach of the promised good time. (Micah 4: 1 to 4.) When in all our broad land, north and south, "they shall sit every man under his own vine and fig tree, and none shall make afraid;" because all enjoy their God-given rights.

Believing as I do that the general cultivation of this fruit will be so great a benefaction, and add so much to the comfort of the people, I am prompted to write this paper, that if possible I may induce some without delay to make a beginning in cultivating this unequalled fruit.

I will send my paper of "Fig Culture," which tells how to grow the trees and how to cure the fruit, &c., to any address.

KIEFFER'S HYBRID PEAR.

There is probably no cultivator of pears who has not experienced, in greater or less degree, feelings of disappointment and discouragement arising from the destructive effects of that mysterious disease known as the *pear blight.* Many an enthusiastic pear culturist has had his enthusiasm changed into disgust by this "black-death" in the pear orchard. The honored President of our association could indite a jeremiad most lachrymose, if he would, by a simple recital of his own woes in this respect. The writer once called upon a gentleman who resided near Lockport, N. Y., and told him that he had come to see his beautiful pear orchard, of which he had heard so much said in its praise, and to see the specimens of fruit on trees of so great a number of varieties. He replied, "my pear orchard is gone; if you have read Byron's Sennacherib you will have the best description I can give you of my pear orchard; a month ago it was indeed a beautiful sight, now it is a blackened ruin;

> 'The angel of death spread his wing on the blast,
> And breathed in the face of the foe as he passed.'"

Remedies almost numberless have been prescribed for this plague, but they all fail; theories as many have been invented to account for its presence, but none of them satisfy all the conditions of the problem; the only way of escape seems to be in the discovery or creation of a race of pear trees not subject to the blight.

For many years the Chinese Sand Pear has been grown in this country mainly as a curiosity, its fruit being esteemed as of no value, though Downing says it is good for cooking. This variety is remarkable for its very vigorous habit of growth, its large glossy foliage, and its entire immunity from blight. But no one of our hybridists seems to have taken it in hand with a view to raising a new race of blight-

proof pear trees, and so Dame Nature, tired of waiting on man's dullness, has tried her hand at hybridising, and given us the first step in the way of this new departure.

In the *Gardener's Monthly* for June, 1878, is a communication from S. B. Parsons, of Flushing, N. Y., giving an account of a pear tree he saw in Thomasville, Georgia, known there as the Chinese Sand Pear, but which he could not recognize as the variety with which he had been familiar for thirty years by that name, because this Georgia variety was reported to him to be nearly equal to the Bartlett, and to ripen in July. He was told that M. Le Comte, the well known entomologist, had found it growing on the coast. Mr. Parsons says of it, "as an ornamental tree it possesses great beauty. Its habit is more pyramidal than that of the Buffam Pear, and greatly resembles that of the Lombardy Poplar. Its foliage is large, thick, with a light color and glossy stem, which is remarkably attractive. Its vegetation is also very early. Other pears near it had just commenced showing life, while the Le Comte Pear was in full leaf. Its fruit came in small quantities to New York market last July, and brought twelve dollars per bushel."

At the Centennial Exhibition in Philadelphia some pears were exhibited which were taken from an accidental seedling, growing upon an old place where trees of the Chinese Sand Pear had been planted for ornament. There happened to be trees of the Bartlett growing near to the Sand Pear, and it is supposed that the pollen from the Bartlett had effected a cross with it, and that these pears were the result. Wm. Parry, of Cinnaminson, N. J., was so well pleased with it that he secured the tree upon which these pears grew, and is now distributing it under the name of Kieffer's Hybrid. The original tree is said to have commenced fruiting in 1873, and has yielded good crops every year since. It is not only productive, but it maintains the same healthy habit as the Sand Pear, manifesting no symptoms of blight or of any disease whatever. The fruit is of good size, weighing from ten to twelve ounces, very uniform, greenish yellow with some russet; flesh white, juicy, and of good quality. It never rots at the core, like Clapp's Favorite and Flemish Beauty; is ripe in October, and on these accounts promises to become valuable as a market pear.

Another seedling from the Chinese Sand Pear, supposed to be a hybrid, has been raised by Mr. Garber, of Pennsylvania, and is said to

be an excellent dessert pear, ripening in August, of large size. It is known as Garber's Hybrid. Another known as the Sandwich Island Pear, is mentioned by Mr. Teas, in Case's Botanical Index. It was grown in Ohio from seed saved by a lady, some twenty years ago, from a fruit she bought in San Francisco, called there Sandwich Island Apple. The tree closely resembles the Sand Pear in foliage and habit of growth, while the fruit is shaped like a Rambo Apple, but larger; of a beautiful yellow color and unsurpassed for canning and preserving. Ripe in September.

Mr. Teas also mentions another pear which has been called the Cincincis Pear, introduced by Mr. Smith, of Ohio, but believed to have been originally imported from the South of France. He believes this to be a pure Japanese Pear or seedling from it. This tree, he says, has fruited for over fifteen years. The fruit ripens in September, will keep for over a month, and is excellent for canning or preserving.

All of these trees are very vigorous and healthy, free from blight or disease of any kind, and Mr. Teas remarks that they are the foundation for hopes of great things, in producing new and hardier varieties of pears, and it does seem that in these we have the beginning of a new race of blight-proof pears. Whether they will take kindly to a northern climate, and bear without harm the rigors of Canadian winters, can only be ascertained upon trial. We wish that the Fruit Growers' Association had the means to import a couple of thousand trees of this promising strain, and distribute one to each of its members for trial in our climate. Should some or any of these crosses with the Sand Pear prove to be able to endure the severity of our winters, and maintain, under the strain of our below zero freezing, their immunity from frozen-sap-blight, and all other sorts of blight; we have indeed in these hybrids the beginning of a valuable race which shall not only be exempt from that terrible scourge of our choicest pears, the blight, but which under skilful treatment will yield varieties as numerous and as delicious as any of the famed Belgian sorts; and what a field for our hybridists; a field where our Arnold, and Saunders, and Dempsey, and Mills may build them an enduring monument, and say with Horace,

"Exegi monumentum ære perennius,
Regalique situ pyramidum altius."

ANSWER TO THE THORN QUESTION IN THE MAY NUMBER.

BY P. E. BUCKE, OTTAWA.

Were all the world a bed of flowers,
Our wishes filled on sea and land,
And all the thorns on shrubs and briers
Were smoothed by nature's wealthy hand;

Had we no toil our limbs to tire,
No hills to smooth, no vales to raise,
What motives would our souls inspire;
How should we reap our Maker's praise;

"Well done thou good and faithful one,
On earth thou tried'st thy best to do,
Thy course through life is safely run,
Enter a state of rest into."

What are our trials, troubles, here,
Our disappointments and our sin,
But thorns that shoot up everywhere
To vex and pinch our lives within.

What makes the northern nations strong?
What most improves the human race?
But energy to overcome
The thorns that spring in every place.

In history we often read
That good hath out of evil sprung.
How John did sign at Runnymede
The charter from his evils wrung.

How our salvation was procured
By persecution's fiercest hate;
Which else this beauteous world had seared,
Had good not come through evil's gate.

Then let us bless both thorn and flower,
Which He doth plant in dale and dell,
Content to know that by His power,
On earth "He doeth all things well."

NOTICE TO MEMBERS.

THE SUMMER MEETING.

The Summer Meeting will be held in the Council Chamber, Peterboro,' on Wednesday, the Sixteenth day of July, 1879, at 10 o'clock A. M.

The Midland Railway will grant tickets over that road at one and one-third fare, to Peterboro' and return.

The "Huffman House" will give reduced rates to Members during their stay in Peterboro'.

The Members are requested to send any specimens of fruit they may have for exhibition to the care of Mr. John Carnegie, Peterboro'.

The following subjects have been suggested for discussion:

1. Pruning—season and method.
2. Transplanting—season, &c.
3. Management of orchards.
4. The cultivation of Cherries and Plums.

Rev. V. Clementi has kindly consented to prepare a paper on fruit growing in the County of Peterboro'.

THE BOTANICAL SOCIETY.

In the May number there appeared an article on the study of botany, from the pen of George Mill, of Warwick, Ont., in which it was proposed to form a botanical society; and to that end, all persons wishing to form such a society were requested to send their names and address to the CANADIAN HORTICULTURIST for publication. The object of this is to enable students of botany to become acquainted with each other, and to take such steps as may seem advisable for the formation of a permanent provincial society.

The following names have been received:

J. FLETCHER, OTTAWA.
G. A. DEADMAN, BRUSSELS.
MRS. WM ROY, OWEN SOUND.

CAMBRAY, Victoria Co
A J Wilkinson

OAKVILLE

FRUIT PACKAGE & BASKET FACTORY.

W. B. CHISHOLM,

Manufacturer of Strawberry, Raspberry, Grape and Peach BASKETS.

Gardeners' PLANT BOXES, BERRY CRATES, &c., &c.,

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As the Proprietor of these Nurseries is supplying and packing the ONTARIO APPLE for the Fruit Growers' Association, an offer is now made to all members desirous of having the following valuable new fruits packed with the Ontario Apple, and freight pre-paid, viz:

THE THREE NEW AND VALUABLE APPLES,

ARNOLD'S BEAUTY, ELLA, and DORA, for $1.00,

Or 1 plant each of Diadem and Hybrid No. 7, and 2 plants of Mr. Saunders' Hybrid Raspberry, for $1.00.

The members enclosing the $2 extra to me for the above named fruits will be supplied with (6) six plants of either of my valuable Seedling Strawberries, No. 3, 4, 8, or 23.

I have no hesitation in saying that these new fruits are all superior in some respects to anything ever before sent out.

CHARLES ARNOLD,

PARIS, ONT.